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Inland water under scrutiny

PERCHLORATE: Many wells are contaminated with a harmful substance that is difficult to remove.

BY JENNIFER BOWLES
THE PRESS-ENTERPRISE

Perchlorate has helped the United States reach the moon, launch July 4 fireworks and power wartime munitions.

The highly explosive salt, used extensively by companies in the Inland area during the 1940s and 1950s, recently has become a health concern.

Underground tentacles of perchlorate have contaminated key Inland drinking water sources, reaching at least 120 municipal wells and 50 private wells in Riverside and San Bernardino counties, according to state agencies that monitor groundwater.

Officials say research is emerging on the extent of the threat posed by perchlorate, which could disrupt thyroid function. State health officials say they will determine by January what amounts are dangerous.

Perchlorate has been found in three large underground plumes in the Inland area – Redlands, Rialto and Glen Avon — and in other wells scattered throughout the two Inland counties.

Most troubling, water officials say, is the recent shutdown of 17 contaminated wells in Rialto, Colton and Fontana. One of those wells supplied Arrowhead Regional Medical Center in Colton until last week.

"This is definitely our top priority. We've got serious problems there," said Kurt Berchtold, assistant executive officer with the Santa Ana Regional Water Quality Control Board, a state agency investigating the pollution's origins.

Some Inland taps undoubtedly have been served perchlorate over the years, water quality and health officials said, but they can't pinpoint where or how much or for how long. Water agencies typically use clean water to dilute the contamination from some wells.

"The public should be advised that there's an issue there, not

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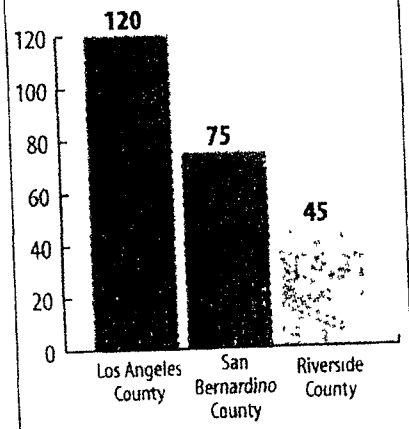
Polluted wells

While Los Angeles County has the highest number of municipal wells containing perchlorate in the state, San Bernardino and Riverside counties rank second and third.



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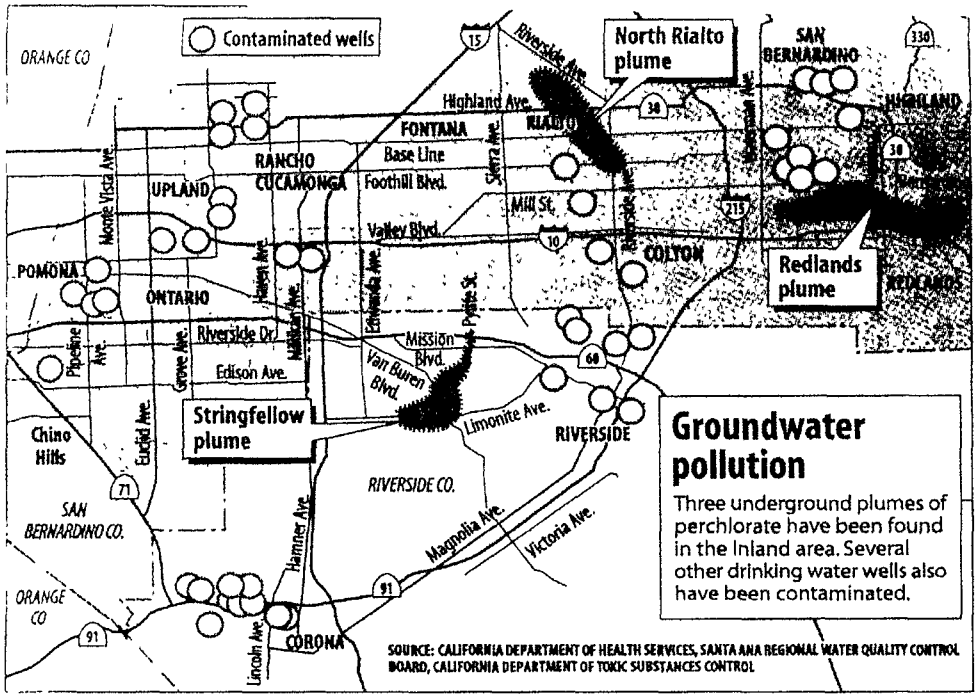

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to panic, but there is an issue," said Kevin Mayer, regional perchlorate coordinator for the U. S Environmental Protection Agency.

Fetuses and young children are most at risk, Mayer said. "A healthy adult really isn't threatened very much by small amounts of perchlorate."

Local history

In the 1940s, defense contractors and other companies made rocket fuel, flares and fireworks in the lightly populated Inland area.

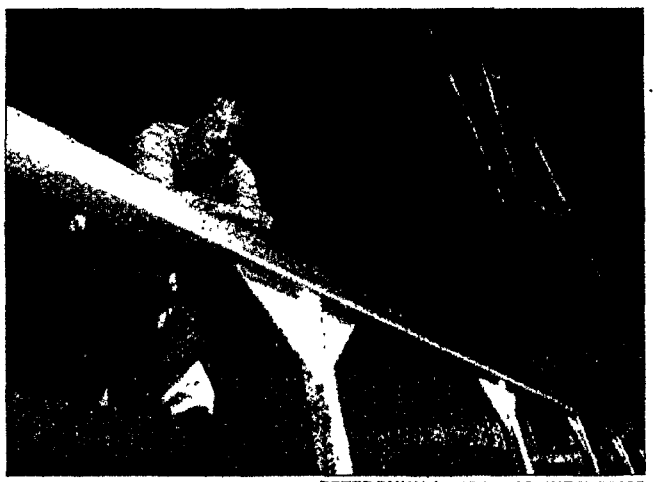
At a 1,000-acre patch in north Rialto, regional water quality officials allege, as many as 40 companies could have dumped perchlorate into unlined pits since at least 1952. A San Bernardino County landfill began taking waste about the same time.

In Glen Avon in 1956, about 200 companies began dumping about 35 million gallons of industrial waste, some of it perchlorate, at the Stringfellow acid pits.

The perchlorate plume in Redlands is believed to have originated at a former jet propulsion plant in Mentone, operated by what was then called Lockheed Corp. from 1962 to 1971, regional water quality officials said.

Officials say environmental laws for handling waste from those operations did not exist when the dumping occurred.

Nonetheless, corporations have a responsibility to clean up the pollution, Berchtold said.



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Eric Fraser, director of water and wastewater for Colton, said the city is having trouble finding uncontaminated sites for new wells.

tin Corp. is paying for the ion exchange system that uses a resin to pull the perchlorate from the water and has paid for other pipelines to help with the city's water supply.

The company, however, is defending itself against 800 Redlands-area residents who filed individual lawsuits claiming the Mentone plant contaminated their water and made them sick. Lockheed officials could not be reached for comment.

Health effects

Perchlorate's health effects and pervasiveness weren't realized until the 1990s. In 1997, new tests were developed to detect perchlorate at low levels. It was then discovered in the Redlands plume; Stringfellow followed in 2001.

Earlier this year, the state reduced its advisory level for perchlorate from 18 parts per billion to 4 parts per billion, prompting concern among Inland water agencies whose wells were between the 4 and 18 mark.

The state plans to release acceptable levels of perchlorate in January and a standard for drinking water in 2004. Water agencies are awaiting those numbers so they can make plans to handle the contaminant.

In Corona, 11 of 20 wells have levels from 4.2 to 12 parts per billion, said Marshall Racine, the city's superintendent of water production and distribution.

"We're kind of holding our breath," he said.

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Paying for the legacy

Regional water quality investigators digging into the history of the Rialto site are scurrying to identify companies responsible for the pollution. Once identified, those companies could be required to pay for alternative water supplies. The affected water agencies serve 250,000 people.

The investigation has centered on two companies, Goodrich Corp. and Kwikset Corp., along with a San Bernardino County landfill, that at one time occupied part of the 1,000-acre plot.

Attorneys for those companies contend that it is difficult to prove that workers long ago caused today's pollution.

In the meantime, Colton is paying $3,000 to $5,000 a day to buy water from neighboring agencies to make up for the three wells shut down because of the pollution.

"We have a community of hard-working people and they should not have to foot the bill for these companies that had poor handling practices," said Eric Fraser, the city's director of water and wastewater.

The city is drilling replacement wells, but finding new locations has been a challenge in an area with other groundwater contaminants.

"We don't have a bunch of places we can go," Fraser said.

Perchlorate removal

Unlike solvents, perchlorate is particularly troubling in groundwater because it moves fast and is hard to get rid of, Mayer said. "Once it's in the water it's very challenging to take it out," he said.

Riverside will begin a relatively new treatment next month to remove perchlorate from the Redlands plume, said Dieter Wirtzfeld, the city's assistant director of utilities for water

Of its 45 drinking water wells, Riverside has 23 with detectable levels of perchlorate, he said. Many of the 23 wells are in San Bernardino County.

Wirtzfeld said Lockheed Mar-